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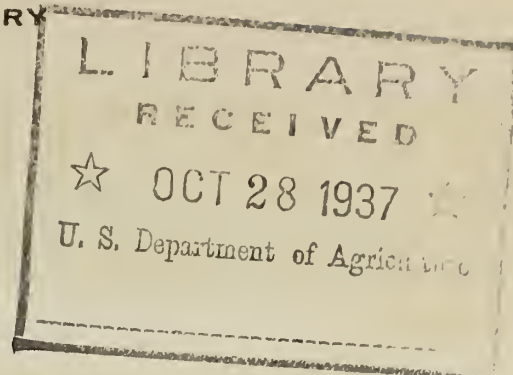


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UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ANIMAL INDUSTRY

WASHINGTON, D. C.



3 REPORT OF THE ACTIVITIES OF THE TECHNICAL SUB-COMMITTEE
OF STATE AND FEDERAL WORKERS
AT THE
WESTERN SHEEP BREEDING LABORATORY,
DUBOIS, IDAHO,

AUGUST 30 TO SEPTEMBER 1, 1937.

In accordance with the recommendations of the Advisory Committee of the Western Sheep Breeding Laboratory as set forth on page 4 of the minutes of its meeting of May 27 and 28, 1937, in Salt Lake City, Utah, the Technical Sub-Committee met at the United States Sheep Experiment Station, Dubois, Idaho, where the Western Sheep Breeding Laboratory is now being developed and in conjunction with officials of the Bureau of Animal Industry worked out the details of the breeding program for 1937-38.

The members of the Sub-Committee present were the State Experiment Station Collaborators, B. L. Warwick of Texas, J. E. Nordby of Idaho, and F. S. Hultz of Wyoming and the Bureau of Animal Industry workers Hugh C. McPhee and W. V. Lambert. By referring to the minutes of the Salt Lake City Meeting it will be noted that the Sub-Committee consists of four State collaborators, one Bureau of Animal Industry representative and the Director of the Laboratory. The Bureau representative was W. V. Lambert, Senior Animal Husbandman in Charge of Genetics Investigations, and as the Director of the Laboratory has not yet been appointed his place on the Sub-Committee was filled by Hugh C. McPhee, Chief of the Animal Husbandry Division of the Bureau. Howard Hackdorn of the Washington Experiment Station, because of other duties, was unable to be present. The Sub-Committee was assisted by the Bureau representatives Stanley L. Smith, C. E. Terrill and John A. Stoehr of the Sheep Experiment Station Staff and D. A. Spencer, Senior Animal Husbandman in Charge of Sheep and Goat Husbandry Investigations of the Bureau.

The Sub-Committee inspected approximately 1200 Rambouillet ewes which the Bureau now has at the Sheep Experiment Station and found 628 of them to be very acceptable, for the work of the Laboratory, with respect to type, size, mutton conformation, thrift, condition, general appearance of the fleeces and freedom from excess skin folds, coarse breech wool, jaw malformations and other obvious defects. Many of the ewes not included in this group of 628 are good or choice in most respects except for such defects as slightly coarse breech wool, large

scurs or small horns or a little too much skin folding. It is therefore the opinion of the Sub-Committee that there are enough good or choice Rambouillet ewes at the Sheep Experiment Station to initiate the breeding program of the Laboratory, approximately, as proposed by the Advisory Committee as set forth in the minutes of the Salt Lake City meeting.

The Bureau of Animal Industry has at the Sheep Station about 30 well-bred Rambouillet rams from which to select for this laboratory work. In addition to these the Bureau is purchasing 20 carefully selected Rambouillet rams from breeders in the western range region for use in this undertaking.

The Sub-Committee therefore recommends the following program:

Phase A - Close Inbreeding:

- 5 pens of 25 ewes, each pen headed by a purchased ram
- 5 pens of 25 ewes, each pen headed by a Sheep Station ram

Of the above matings one will consist of 25 ewes and 1 ram that have the longest staple length.

Phase B - Moderate Inbreeding:

- 5 pens of 25 ewes, each pen headed by a purchased ram
- 5 pens of 25 ewes, each pen headed by a Sheep Station ram.

Of the above matings one will consist of 25 ewes and 1 ram that have the best mutton conformation.

The ten purchased rams to be used in phases A and B will represent the best of the 20 rams purchased from different breeders for use in this experiment. The 10 Sheep Station rams for use in phases A and B will, as far as possible, be mated to related ewes in order to speed up the development of inbred lines. These matings or related sheep will be equally distributed between phases A and B. The ewes for matings with the 10 purchased rams and any Station rams not used in closely related matings will represent the best of the remaining ewes available and these will be distributed at random for the different age groups between the various matings.

Phase C - Progeny Testing Sires:

- 10 pens of 20 ewes each headed by a purchased ram and 2 pens of 20 ewes each headed by a Station ram if sufficient ewes are available.

The ewes remaining after selections have been made for the A and B phases and the three special matings will be distributed at random to the various rams by different age groups.

Of the above matings one will consist of 25 ewes and 1 ram with the most open faces that can be selected.

In assigning any ewes to the "C" phase, that may not be from the group of 628 superior ewes, only the best of the other Rambouillet ewes available will be assigned.

As the Sub-Committee worked on the selection of ewes Professor Nordby examined the mouth of every ewe for jaw malformations to be sure that no ewes with defective jaws would be admitted to the groups of matings herein before outlined. About 35 ewes were found that were sufficiently defective in their jaws from which a breeding pen should be made up for a special study of the inheritance of this character and the Sub-Committee therefore recommends that this study be included in the program of the Laboratory.

The advisory Committee agreed at the Salt Lake City meeting that the characters of most importance were "length of staple", "second weight of fleece", and "mutton character". However, due to unavoidable delay in the development of the wool scouring facilities of the Bureau's new animal fiber laboratory at Beltsville, Maryland, it is not possible to have the scoured fleece weights on all the ewes at the Sheep Station in time for use this fall. For this reason the Sub-Committee herein recommends that the character "open face" be substituted for "scoured weight of fleece" until next year or such time as data on scoured weight of fleece may be available.

The laboratory building and the director's residence are being constructed and a new well is being drilled.

Respectfully submitted,

F. S. Hultz,
W. V. Lambert,
J. E. Nordby,
B. L. Warwick,
Hugh C. McPhee.

